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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,882	08/05/2003	Alpesh Patel	CISCP334/6994	1592
224,34	7590	03/13/2007		
BEYER WEAVER LLP P.O. BOX 70250 OAKLAND, CA 94612-0250			EXAMINER HOFFMAN, BRANDON S	
			ART UNIT	PAPER NUMBER
			2136	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/635,882

Applicant(s)

PATEL ET AL.

Examiner

Brandon S. Hoffman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :7-26-04/11-16-05/12-6-06/12-13-06/1-26-07.

## **DETAILED ACTION**

1. Claims 1-53 have been examined.

### ***Information Disclosure Statement***

2. The information disclosure statements (IDS) submitted on July 26, 2004, November 16, 2005, December 6, 2006, December 13, 2006, and January 26, 2007, are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 5-7 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claims 5 and 32, the trademark name "Windows" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

6. Claims 6 and 7 depend from claim 5 and therefore inherit its deficiencies.

### ***Claim Rejections - 35 USC § 102***

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7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-10, 13-36, and 38-53 are rejected under 35 U.S.C. 102(a/e) as being anticipated by Yokote (U.S. Patent Pub. No. 2002/0147820).

Regarding claims 1 and 45-47, Yokote teaches in a server adapted or authentication, authorization, and accounting, a method/computer-readable medium/server of generating a shared key between a Home Agent and a Mobile node, comprising:

- Receiving a request message from a Home Agent, the request message identifying the Mobile Node (fig. 6, ref. num S6-2);
- Deriving key information from a key or password associated with the Mobile Node (fig. 6, ref. num S6-3); and
- Sending a reply message to the Home Agent, the reply message including the key information associated with the Mobile Node, thereby enabling the Home Agent to derive a shared key to be shared between the Mobile Node and the Home Agent from the key information (fig. 6, ref. nu S6-4 and S6-5).

Regarding claim 2, Yokote teaches wherein deriving key information comprises deriving the key information from a second set of key information derived from the key of password (paragraph 0062).

Regarding claim 3, Yokote teaches wherein deriving key information comprises obtaining the derived key information from a domain controller or server (fig. 5-7, the ticket granting server).

Regarding claim 4, Yokote teaches wherein the request message is an access request message and the reply message is an access reply message (paragraph 0060).

Regarding claim 5, Yokote teaches wherein the key or password comprises a Windows password associated with the Mobile Node (fig. 6, ref. num S6-1).

Regarding claim 6, Yokote teaches further comprising obtaining the key or password from a domain controller (fig. 5-7, ticket granting server).

Regarding claim 7, Yokote teaches wherein obtaining the key or password from the domain controller comprises:

- Sending a request to the domain controller for the key or password associated with the Mobile Node; and receiving the key or password associated with the

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Mobile Node from the domain controller (fig. 6, ref. num S6-1, the user is required to enter and send the user name).

Regarding claim 8, Yokote teaches further comprising applying the key information to authenticate the request message (fig. 6).

Regarding claim 9, Yokote teaches wherein the key or password is stored at the Mobile Node, thereby enabling the Mobile Node to derive the key information from the key or password (paragraph 0069, the SIM of the Mobile Node stores the key).

Regarding claims 10 and 48-50, Yokote teaches in a Home Agent supporting Mobile IP, a method/computer-readable medium/Home Agent of authenticating a Mobile Node, comprising:

- Receiving a registration request from a Mobile Node, the registration request identifying the Mobile Node (fig. 6, ref. num S6-1);
- Sending a request message to a AAA server, the request message identifying the Mobile Node (fig. 6, ref. num S6-2);
- Receiving a reply message from the AAA server, the reply message including key information associated with the Mobile Node (fig. 6, ref. num S6-3);
- Deriving a key from the key information, the key being a shared key between the Mobile Node and the Home Agent (fig. 6, ref. num S6-4); and
- Sending a registration reply to the Mobile Node (fig. 6, ref. num S-65).

Regarding claim 13, Yokote teaches wherein deriving the key and sending the registration reply to the Mobile Node are performed when the reply message received from the AAA server indicates that the Mobile Node is successfully authenticated (fig. 7 takes place after fig. 6 authenticates the Mobile Node).

Regarding claim 14, Yokote teaches wherein the request message is an access request message and the reply message is an access reply message (paragraph 0060).

Regarding claim 15, Yokote teaches wherein the Mobile Node is to derive the shared key from a second set of key information stored at the Mobile Node (paragraph 0061).

Regarding claim 16, Yokote teaches wherein the key information is equivalent to the second set of key information (paragraph 0061).

Regarding claim 17, Yokote teaches wherein the second set of key information stored at the Mobile Node is a root key, a password, or a key shared between the Mobile Node and the Home Agent in a previous session (paragraph 0057).

Regarding claims 18 and 39, Yokote teaches wherein the registration request includes a SPI, replay protection timestamp, and indicates an algorithm to be used to



authenticate the registration request, wherein the SPI, the replay protection timestamp, and the algorithm are associated with the key information (fig. 8).

Regarding claim 19, Yokote teaches further comprising installing the derived key, the SPI, the replay protection timestamp, and the algorithm in a security association (paragraph 0049).

Regarding claims 20 and 40, Yokote teaches wherein the registration reply includes a SPI, replay protection timestamp, and indicates an algorithm to be used to authenticate the registration replay, wherein the SPI, the replay protection timestamp, and the algorithm are associated with the key information (fig. 8).

Regarding claim 21, Yokote teaches wherein the registration reply indicates that the Mobile Node is to derive the shared key between the Mobile Node and the Home Agent (fig. 6, ref. num S6-3).

Regarding claims 22 and 42, Yokote teaches wherein at least one of the presence of one or more extensions in the registration reply and an SPI in the registration reply indicates that the Mobile Node is to derive the shared key between the Mobile Node and the Home Agent (paragraph 0048).

Regarding claims 23 and 43, Yokote teaches wherein the registration request indicates that the Home Agent is to derive the shared key between the Mobile Node and the Home Agent from a second set of key information received by the Home Agent (fig. 6, ref. num S6-3).

Regarding claims 24 and 44, Yokote teaches wherein at least one of the presence of one or more extensions in the registration request and an SPI in the registration request indicates that the Home Agent is to derive the shared key between the Mobile Node and the Home Agent (paragraph 0048).

Regarding claim 25, Yokote teaches wherein the presence of an authentication protocol extension in the registration request indicates a protocol to be used to authenticate the registration request and derive the shared key (paragraph 0049).

Regarding claim 26, Yokote teaches wherein the presence of a session key extension and derived session key extension in the registration request indicates that both a session key and a derived session key are to be generated and installed (paragraph 0049).

Regarding claim 27, Yokote teaches further comprising receiving a subsequent registration request from the Mobile Node to refresh the derived session key (paragraph 0009).

Regarding claim 28, Yokote teaches further comprising authenticating the subsequent registration request using the session key (fig. 6).

Regarding claim 29, Yokote teaches further comprising sending a subsequent registration reply to the Mobile Node including the derived session key extension, wherein the registration reply is to be authenticated by the Mobile Node using the session key (fig. 6, ref. num S6-4).

Regarding claim 30, Yokote teaches wherein the key information is a previously used session key shared between the Mobile Node and the Home Agent (paragraph 0057).

Regarding claim 31, Yokote teaches wherein the key information is derived from a password associated with the Mobile Node (paragraph 0061).

Regarding claim 32, Yokote teaches wherein the password is a Windows password (fig. 6, ref. num S6-1).

Regarding claim 33, Yokote teaches further comprising deriving a subsequent key from the shared key (paragraph 0050).

Regarding claim 34, Yokote teaches wherein deriving the subsequent key from the shared key is performed when a binding associated with the Mobile Node is cleared (paragraph 0009-0012).

Regarding claim 35, Yokote teaches wherein the binding associated with the Mobile Node is cleared upon expiration of the lifetime of the Mobile Node or deregistration of the Mobile Node (paragraph 0009-0012).

Regarding claims 36 and 51-53, Yokote teaches in a Mobile Node, a method/computer-readable medium/mobile node of registering with a Home Agent supporting Mobile IP, comprising:

- Sending a registration request to the Home Agent (fig. 6, ref. num S6-2);
- Receiving a registration reply from the Home Agent, the registration reply indicating that the Mobile Node is to derive a key to be shared between the Mobile Node and the Home Agent (fig. 6, ref. num S6-4); and
- Deriving a key to be shared between the Mobile Node and the Home Agent from the key information stored at the Mobile Node (fig. 6, ref. num S6-5).

Regarding claim 38, Yokote teaches wherein the key information is a root key, a password, or a key shared between the Mobile Node and the Home Agent in a previous session (paragraph 0061, session key).

Regarding claim 41, Yokote teaches wherein the registration reply indicates whether the Mobile Node is to derive the shared key between the Mobile Node and the Home Agent, the method further comprising:

- Determining from the registration reply whether the Mobile Node is to derive the key; wherein deriving a key is performed when it is determined from the registration reply that the Mobile Node is to derive the key (paragraph 0061).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 11, 12, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokote (USPGPUB 2002/0147820) in view of Abrol et al. (U.S. Patent No. 6,785,823).

Regarding claims 11, 12, and 37, Yokote teaches all the limitations of claims 10 and 36, above. However, Yokote does not teach challenge response.

Abrol et al. teaches wherein the registration request includes a CHAP challenge and response (fig. 2).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine CHAP, as taught by Abrol et al., with the method of Yokote. It would have been obvious for such modifications because CHAP allows a mobile device to perform authentication (see col. 2, lines 52-55 of Abrol et al.).

Regarding claim 12, Yokote as modified by Abrol et al. teaches wherein deriving a key from the key information comprises deriving the key from the key information and a CHAP challenge and response obtained from the registration request (see fig. 2 of Abrol et al.).

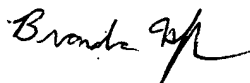
Regarding claim 37, Yokote as modified by Abrol et al. teaches wherein deriving a key from the key information comprises deriving the key from the information and a CHAP challenge and response obtained from the registration reply (see fig. 2 of Abrol et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon S. Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nasser G. Moazzami can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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